



The noise measurement instrumentation consisted of a Svantek Model 971 Sound Level Analyzer using a Svantek 7052E Precision Microphone covered with a 3½-inch windscreen. The SVAN-971 was programmed to measure and store Leq noise data in 1-minute samples using an RMS 'slow' time response. The SVAN-971 computed broadband sound levels in unweighted (dBZ) and A-weighted (dBA) decibels, and computed the unweighted third-octave band Leq levels from 20 Hz to 20 kHz. The noise measurement system was calibrated with a Larson Davis Model 150 Calibrator, and complies with ANSI Standard S1.4 for Type 1 quality and accuracy.

Data reduction and post-processing consisted of comparing the broadband A-weighted and third-octave band results measured with and without the silencers at each measurement position. The noise reduction (dBNR) is the difference in decibels between the two measured noise levels. Attempts were made to maintain consistency with as many variables as possible between the two noise measurements; however, background traffic noise did contribute slightly to some of the outdoor readings.

As shown in **Photo 3**, the dryer blowers are typical backward centrifugal air fans. The impellers spin at 3,600 RPM, and each fan has one impeller with 11 blades. Barring other effects, this would lead to expected higher noise emission levels in the 60 Hz, 120 Hz, 180 Hz, 630 Hz and 1,250 Hz third-octave frequency bands. As shown in **Photo 4**, the prototype silencers consisted of acoustically lined cylindrical covers attached to the air intake-side of the blowers. No noise control modifications were performed on the air exhaust-side of the blowers.



Photo 3. Dryer Blowers Without Silencers



Photo 2. Dryer Blowers With Silencers